

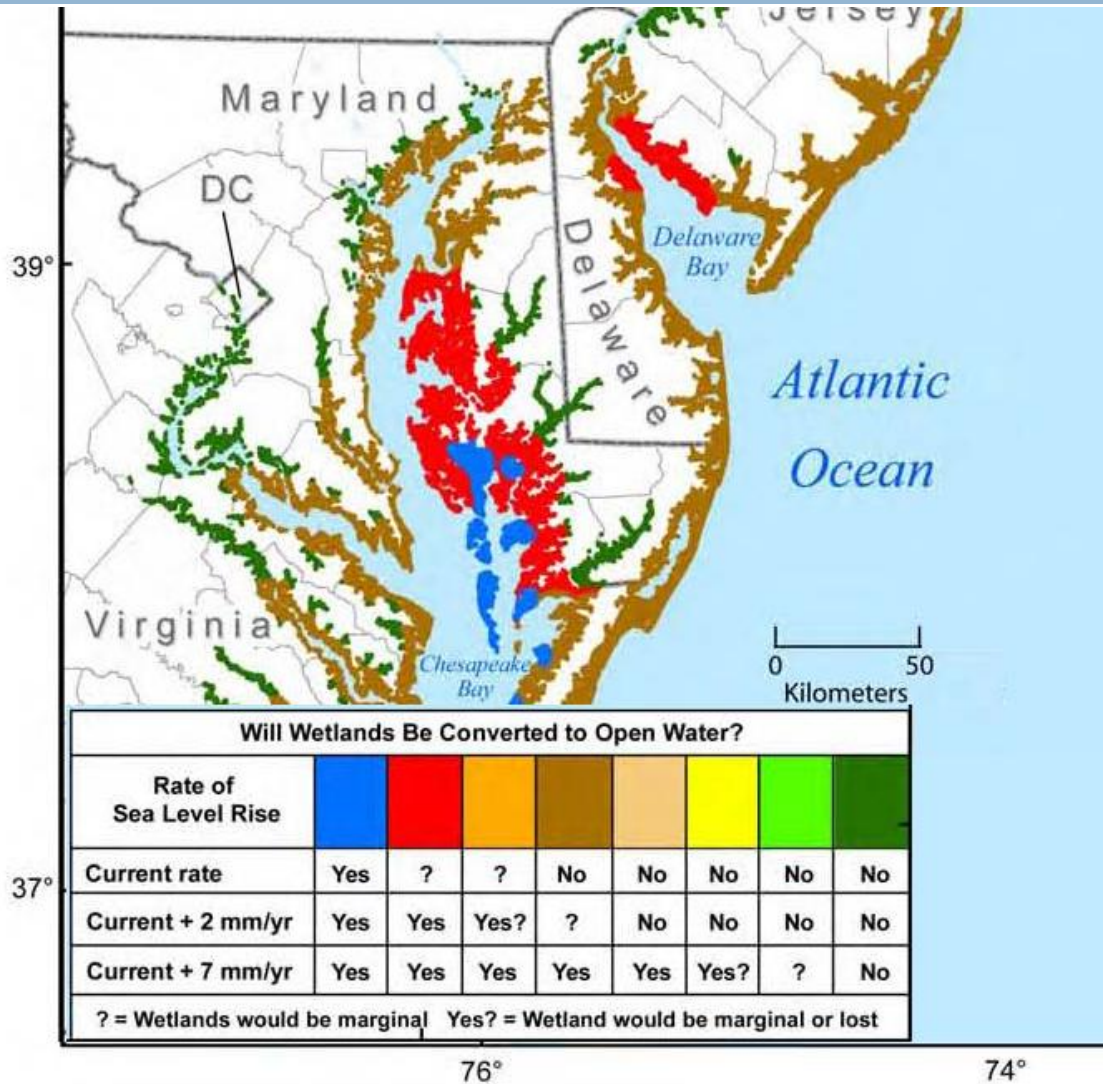
MARYLAND SEA GRANT PROGRAM 2010 NSGO REVIEW

Dorn Carlson

Maryland

MD SG

2



□ **Management Team**

- Director, Jonathan Kramer, (1.0 FTE)
- Assistant Director for Research, Fredrika Moser, (1.0 FTE)
- Extension Leader, Douglas Lipton, (1.0 FTE)
- Assistant Director for Communications, Jack Greer, (1.0 FTE)
- Assistant Director for Administration, Bonny Marcellino, (1.0 FTE)

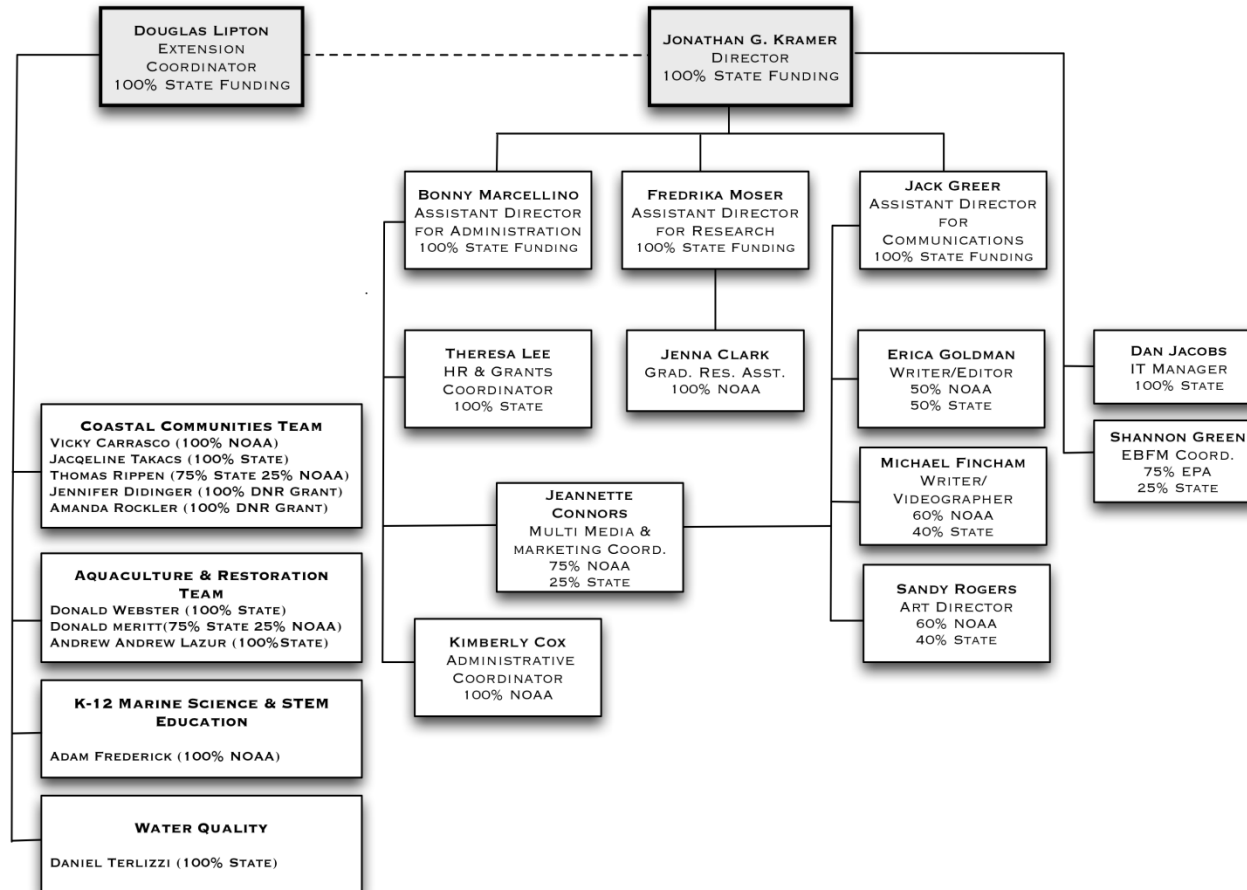
□ **Staffing:**

- Administrative (8 FTEs)
- Communications (6 FTEs)
- Extension (11 FTEs)
- Education (1 FTEs)

Program Organizational Chart

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4



Extension Program

MD SG

5

Aquaculture and Restoration Team

Andy Lazur* (UMCES HPL)
Donald Webster UME WREC)
Donald Meritt* UMCES HPL)

Coastal Communities and Economies Team

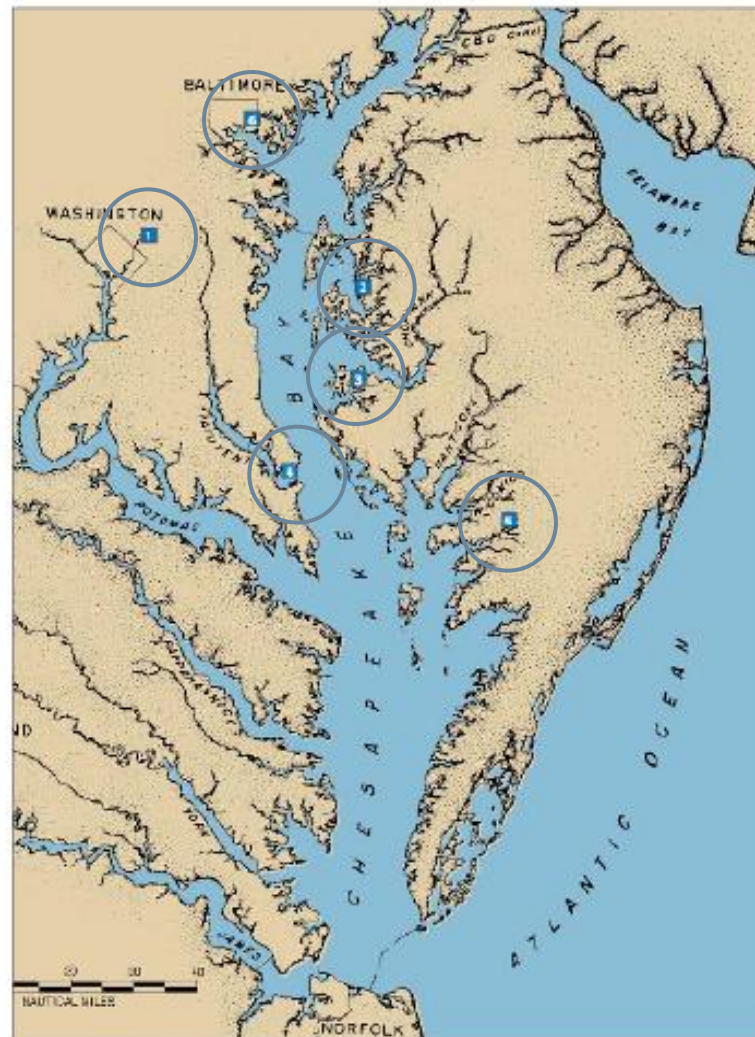
Doug Lipton (UMCP)
Vicky Carrasco (UMCP)
Tom Rippen (UMES)
Jennifer Dindinger (UME WREC)
Amanda Rockler (UME Howard Cty)
Jackie Takacs (UMCP)

Marine Science and STEM for K-12

Adam Frederick (IMET)

Water Quality

Dan Terlizzi (IMET)
Doug Lipton



University of Maryland Locations

Maryland Cooperative Extension

1 Coordinator, SGEP
College Park

Coastal Communities
Specialist
College Park

2 Marine Agent
Wye Research &
Education Center
Queenstown

UM Center for Environmental Science

3 Finfish Specialist
Shellfish Specialist
Horn Point Laboratory
Cambridge

4 Marine Agent
Chesapeake Biological
Laboratory
Solomons Island

UM Eastern Shore

5 Seafood Technologist
Seafood Specialist
Princess Anne

UM Biotechnology Institute (IMET)

6 Water Quality Specialist
Education Specialist
Center of Marine
Biotechnology
Baltimore

Program Management – Advisory Board MD SG

6

Institutional Council

The Institutional Council (IC) is a representative body of the institutions that perform Sea Grant research, education, and outreach activities. It has both an implementation and advisory function. While the Governance Board and the President of UMCES retain final oversight authority, the IC also plays an important role with regard to accountability and the development of programmatic guidance. The IC reports its findings and advice to the Governance Board.

Advisory Board

The Maryland Sea Grant Advisory Board provides primary (high-level) linkage to important external clients in Maryland. The Board's composition reflects diverse stakeholders representing key government agencies at the state and federal level, important marine-related industries, and educational and nongovernmental organizations. The Advisory Board also includes "independent advisors" with specific expertise and standing within the community

Academic Advisory Committee

The Academic Advisory Committee (AAC) serves as the primary advisor to the research portion of the Maryland Sea Grant Program. AAC members evaluate the scientific merit and programmatic fit of preproposals submitted for funding during the Maryland Sea Grant omnibus proposal cycle. The essential characteristic of the AAC is its ability to render definitive judgments of a scientific nature.

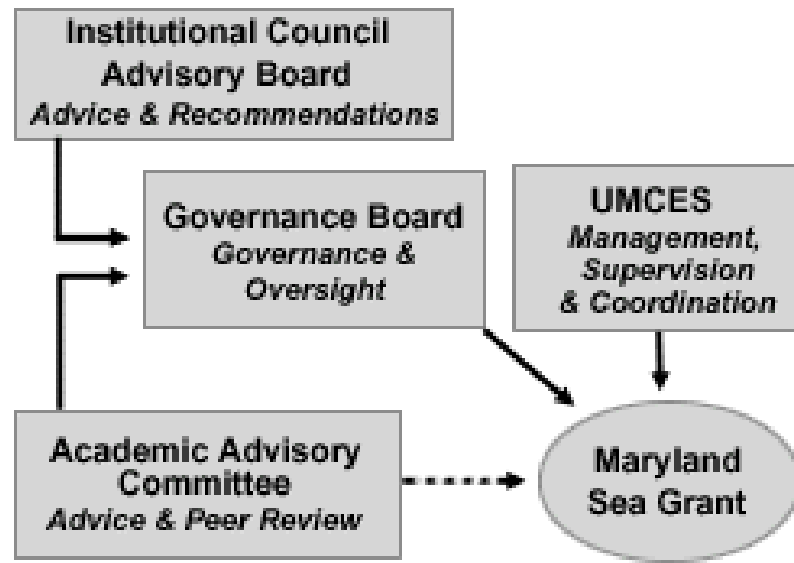
Dr. William E. Kirwan, University System of Maryland
Dr. Donald F. Boesch, Univ. of Maryland Center for Environmental Science
Dr. William Mote, Univ. of Maryland, College Park
Pending, Johns Hopkins University
Dr. Thelma Thompson, Univ. of Maryland, Eastern Shore
Dr. Anson Hines, Smithsonian Environmental Research Laboratory
Dr. Cheng-I Wei, Univ. of Maryland, College of Agriculture & Natural Resources
Dr. Kelton Clark, Morgan State Univ.
Dr. Jonathan Kramer, Maryland Sea Grant College

Mr. William Matuszeski, U.S. EPA Chesapeake Bay Program (retired)
Dr. Robert Summers, MD Dept of Environment
Ms. Ann Swanson, Chesapeake Bay Commission
Dr. Peyton Robertson, NOAA Chesapeake Bay Office
Mr. Glenn Page, EcoLogix Group, Inc.
Mr. Christopher Washburn, So. MD Marine Trades Assoc. of MD
Mr. Mark Bryer, The Nature Conservancy
Dr. Beth McGee, Chesapeake Bay Foundation
Mr. Dave Wilson, Maryland Coastal Bays Program
Mr. Ed Rhodes, Phillips Seafood Inc.
Dr. Thomas Miller, UMCES Chesapeake Biological Laboratory; Academic Advisory Board Liaison

Dr. William Boicourt, UMCES Horn Point Laboratory
Dr. Patricia Delgado, Maryland Chesapeake Bay National Estuarine Research Reserve
Mr. Matt Flemming, Director, Maryland Coastal Program (NOAA CZM)
Dr. Andrea Johnson, Univ. of Maryland, Eastern Shore
Dr. Allen Place, Univ. of Maryland Biotechnology Institute
Dr. Tom Miller, UMCES Chesapeake Biological Laboratory

Institutional Setting

7



□ Governance Board:

Chancellor of the University System of Maryland (USM)

President of the University of Maryland, College Park (UMCP)

President of the University of Maryland Center for Environmental Science (UMCES)

- University of Maryland Center for Environmental Science is responsible for the operational oversight of MDSG and is its administrative home. It has the legislatively mandated mission for coordination of marine resources programs in the USM
- University of Maryland College manages University of Maryland Extension as part of its Land Grant mission. Sea Grant Extension an integral component

State Sea Grant Program Plan –

Estimated 4-yr Budget Allocation per focus area

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8

National Focus Area	Focus Area from Program Strategic Plan	Estimated Level of Effort of Federal, Match and Leveraged (%)	Estimated Level of Effort of Federal and Match (\$)	Estimated Level of Effort of Leveraged (\$)
Safe & Sustainable Seafood Supply	Sustainable Natural Resources of Coastal Maryland	39%	\$ 3,020,000	\$ 1,000,000
Sustainable Coastal Development	Viable Coastal Communities and Economies	19%	\$ 1,430,000	\$ 500,000
Healthy Coastal Ecosystems	Resilient Ecosystem Processes and Responses	36%	\$ 3,440,000	\$ 500,000
Hazard Resiliency in Coastal Communities	MDSG Cross-Cut: Understanding regional effects of climate change and sea level rise and their impacts on coastal communities and ecosystems	6%	\$ 500,000	\$ 100,000
Total		100%	\$ 8,390,000	\$ 2,100,000

Highlights

9

- Objective: By 2013, regional EBFM structure, facilitated by Maryland Sea Grant, develops quantitative reference points for five key species that inform EBM efforts.
 - Outcome: Using U.S. EPA, NSGCP Omnibus funding and leveraged resources, MDSG developed the scientific infrastructure needed to support EBFM. The process has been endorsed by the fisheries management and scientific communities, now includes over 80 participants.
 - Perf. Meas.: Number of stakeholders who use ecosystem-based approaches in the management of land, water, and living resources in coastal areas taking advantage of Sea Grant research, communication, extension and education activities. AND Number of models and scientific results (e.g. ecosystem-based approaches) developed to assess and predict the natural functioning of coastal areas
- Objective: By 2013 Local communities have the information and techniques to enhance coastal economic activities and protect the health of the natural coastal environment.
 - Outcome: MDSG Extension formed the Collaborative for Land Use Education (CLUE) and created Coastal Watershed Specialists with MD-CZM to address critical needs in coastal communities statewide. Program now has added 3 specialists working in this area.
 - Perf. Meas.: Number of coastal communities engaged in activities (e.g. visioning, resource inventories, analysis of development policies) or who address coastal development, encompassing economic and environmental sustainability taking advantage of, or having been exposed to, Sea Grant research, communication, extension and educational activities or capacity building resources (eg. tools, data and technologies).

Major Partners

10

- U.S. EPA Chesapeake Bay Program — ecosystem based fisheries management, ecological thresholds initiative, Scientific and Technical Advisory Committee (STAC) leadership, numerous other activities
- NOAA Chesapeake Bay Office — ecosystem-based fisheries management
- Maryland Ports Administration — sediment quality studies and dredging policy.
- Maryland DNR Chesapeake and Coastal Program (MD-CZM Program) — Watershed restoration/coastal communities partnership
- VA and DE Sea Grant — Regionally coordinated RFPs and numerous other activities
- Chesapeake Research Consortium — Oyster restoration and ports studies and other activities
- NOAA— Engagement of NOAA NMFS staff in Silver Spring and Regional Science Centers through EBFM effort

2008/2009 Network Activities^{MD SG}

11

Sea Grant Network Activities

- Chair, SG Research Coordinators (Fredrika Moser)
- Focus Teams: SSSS (Andy Lazur)
- SGA Resources and Finances Committee (Bonny Marcelino)
- SGA NAC, PMC and delegate (Fredrika Moser)
- Chair, SSSD Network (Vicky Carrasco)

Other Network Activities

- Board of Directors, Mid-Atlantic Coastal Ocean Observing Regional Association (Fredrika Moser)
- Chair, Latinos and Planning Division, American Planning Association (Vicky Carrasco)
- President-Elect, National Marine Educators Association (Adam Frederick)

Other Relevant Activities

- Chair, EPA Chesapeake Bay Program STAC (Doug Lipton)
- Chair, Mid-Atlantic Panel on Invasive Species (Fredrika Moser)
- Board President, Center for Watershed Protection (Jonathan Kramer)
- Board of Directors, Hudson River Foundation (Jonathan Kramer)

2010 RFP Process

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12

- MD SG did not run a competition for 2010 projects and are adjusting their calendar to the even year RFP cycle by running a focused 2010 RFP competition for one-year projects starting January 2011.
- RFP Highlights Strategic Plan Elements Aligned with NSGO National Plan
 - ▣ RFP Targets four elements in aligned strategic plan tied to outcomes
 - Advance ecosystem-based fisheries management
 - Understand and predict large-scale ecosystem responses and trajectories
 - Develop an understanding of immediate and long-term effects of climate change, sea level rise, and other hazards on coastal communities
 - Develop an understanding of socioeconomic implications of environmental change and efforts to restore the Bay.
 - ▣ RFP Process
 - Highlights connecting research to outcomes and engagement
 - Includes review of pre and full proposals by an outreach panel
 - Other review elements of process comparable to other programs and an NSF style external and internal mail and panel review process.

2008/2009 Program Metrics – Awards and Honors

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13

- Vicky Carrasco as Chair, Latinos in Planning Division American Planning Association Award for Communication Excellence
- Erica Goldman: APEX Award for Excellence, scientific and environmental writing, for “The Bay’s Other Filter Feeders,”
- Michael W. Fincham: APEX Award for Excellence, magazine and journal writing, for “Whatever Happened to Pfiesteria?”
- Donald Webster MD Secretary of Agriculture Citation, Maryland Senate Citation, MD House of Delegates Resolution for service as Chair of the Maryland Aquaculture Coordinating Council

2008/2009 Highlights of Metrics^{MD SG}

14

- Near top of network in undergraduate students supported in 2008 (17)
- MDSG's Portfolio Approach to STEM Education Efforts is Reflected in Metrics
 - ▣ Undergraduate students supported through NSF funding (REU) with additional funding for administrative assistants from NOAA award
 - ▣ K-12 STEM efforts (teachers and students) with numerous innovative partners statewide (schools, state agencies, universities)
 - ▣ Graduate Research Fellows:
 - Are engaged in Sea Grant program beyond research
 - Receive annual training in science communication
 - Are engaged in undergraduate mentoring through REU program

2008/2009 Program Impacts

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15

- Maryland Sea Grant Extension faculty and other program staff have been; key in the development of the economic analysis for the EIS on the introduction of a non-native oysters, fully engaged on the Maryland Oyster Advisory Commission, led the development of a Maryland/Virginia Shellfish Aquaculture Plan, and facilitated a historical analysis of the efficacy of oyster restoration baywide. These investments have impacted management of oyster resources in Chesapeake Bay and led to new legislation in Maryland.
- Maryland Sea Grant senior staff worked with the Maryland Coastal Program (NOAA CZM) to refine their organizational vision and priorities. This has led to a novel partnership between MD-CZM and MDSG Extension focused on addressing critical coastal watershed and land use issues in the region.
- Using NOAA AIS Program funding, MDSG developed a comprehensive invasive species rapid response plan template for use by states in the Mid-Atlantic region and beyond for responding to newly introduced invasive species. It uses the Incident Command System design for agencies to follow when responding to a report of an invasive species. The template has been adopted by MD, VA and DE state agencies, and been requested by Florida and Arkansas.

2008/2009 Research Accomplishments^{MD SG}

16

- Research funding supported development of an optical water quality model to predict the diffuse attenuation coefficient for light based on commonly monitored water quality variables in the Chesapeake Bay. The results of this research led to setting water quality targets for restoration of SAV in Chesapeake Bay region.
- Rip current prediction and warnings were further advanced through research developing predictive models linked to real time video imaging of Ocean City beach rip currents. Research was coupled with outreach to lifeguards regarding swimmer safety and rip currents.

Best Management Practices

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17

- Online templates for proposal forms developed by MDSG have been endorsed by NOAA GMD contact, and adopted by other Programs nationwide.
- MDSG's efforts to quantify the impact of its scientific publication was recognized by the 2005 PAT as a BMP. *"The PAT is not aware of any other Sea Grant Program that is attempting to evaluate the impact of their scientific publications. The MDSG is to be commended for this precedent-setting initiative."*
- MDSG has made a long term commitment to linking strong scientific input to critical policy discussions through facilitation and synthesis. Maryland Sea Grant effective in this role because of its "honest broker" reputation and the capacity and engagement of multiple staff at the interface between science and policy in the Bay and regionally.
- Leadership in such regional groups as the Mid-Atlantic Panel on Invasive Species, MACOORA and others to engage Sea Grant fully in efforts that cross-cut issues and local-state-regional-federal policy efforts.